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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,913	08/25/2003	Yisong Yu	91464/JLT	2332
1333	7590	07/28/2006	EXAMINER	
PATENT LEGAL STAFF EASTMAN KODAK COMPANY 343 STATE STREET ROCHESTER, NY 14650-2201			LEE, SIN J	
			ART UNIT	PAPER NUMBER
			1752	

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

10/647,913

Applicant(s)

YU ET AL.

Examiner

Sin J. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 11 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-10,12,14-22,24-32,34-41,45-51,53-59,62-67,69-75 and 77 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2,4-10,12,14-22,24-32,34-41,45-51,53-59,69-75 and 77 is/are allowed.
- 6) ☒ Claim(s) 62-67 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 62-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al (US 2002/0007751 A1).

Inoue teaches a negative working lithographic printing plate precursor comprising a hydrophilic support having thereon a heat-sensitive layer containing at least one of a thermoplastic particulate polymer, *a particulate polymer having a heat-reactive group* and a microcapsule containing a compound having a heat-reactive group incorporated therein (see abstract, [0011] and Example 1). For the particulate polymer having heat-reactive group, Inoue teaches a copolymer of allyl methacrylate and butyl methacrylate

(see [0201]-[0202]). Inoue furthermore teaches the equivalence of the ally methacrylate and (meth)acrylic acid in [0027] as the monomers having heat-reactive group.

Therefore, it would have been obvious to one skilled in the art to use a copolymer of (meth)acrylic acid and butyl methacrylate as Inoue's particulate polymer having a heat-reactive group with a reasonable expectation of obtaining a lithographic printing plate precursor having a good on-the-machine developability. Therefore, Inoue's teaching renders obvious present copolymer of a hydrophobic monomer and a monomer that has a carboxylic group. Inoue furthermore teaches ([0071]-[0073]) the use of hydrophilic resin (such as *cellulose or starch derivative or a resin including an amino group*) in his heat-sensitive layer in order to improve the on-the machine-developability as well as enhance the strength of the heat-sensitive layer itself. It would have been obvious to one skilled in the art to use *cellulose or starch derivative or a resin including an amino group* as Inoue's hydrophilic resin with a reasonable expectation of obtaining a lithographic printing plate precursor having a good on-the-machine developability.

Therefore, Inoue's teaching renders obvious present hydrophilic polymer. Inoue also teaches the use of a light-to-heat converting agent which absorbs light having wavelength of not lower than 700 nm ([0096]-[0099]). Therefore, Inoue's teaching renders obvious present inventions of claims 62-67 (it is the Examiner's position that Inoue's heat-sensitive layer coating, which contains a copolymer of (meth)acrylic acid and butyl methacrylate, hydrophilic resin (such as cellulose or starch derivative or a

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resin including an amino group) and a light-to-heat converting agent, would inherently be aqueous-insoluble when dried).

***Allowable Subject Matter***

4. Claims 1, 2, 4-10, 12, 14-22, 24-32, 34-41, 45-51, 53-59, 69-75 and 77 are allowed. Tanaka et al (EP'088), Ishida et al'556 or Inoue et al'751 does not teach or suggest present polymer particles of claims 1 and 45, each of which has to comprise thermally softenable hydrophobic polymer, hydrophilic polymer and bonding agent chemically bonded to the hydrophobic polymer and to the hydrophilic polymer. None of the cited prior arts teaches or suggests present hydrophilic polymer and a copolymer of a hydrophobic monomer and a bonding monomer, the bonding monomer chemically bonded to the hydrophilic polymer and to the hydrophobic monomer as claimed in present claims 12, 53 and 54. None of the cited prior arts teaches or suggests present copolymer comprising a hydrophilic polymer, a hydrophobic monomer and a monomer that has a carboxylic group as claimed in present claim 21. None of the cited prior arts teaches or suggests present hydrophilic polymer particles comprising a hydrophilic polymer and a copolymer of a hydrophobic monomer and a monomer that has a carboxylic group as claimed in present claims 31, 32, 69 and 70. None of the cited prior arts teaches or suggests present particles comprising chitosan and a thermally softenable hydrophobic polymer as claimed in present claims 41 and 77.

Huang et al'994 does not teach present inventions because his printing plate precursor is aqueous eluable when coated and dried (in the development step, the unexposed portions are removed).

### ***Response to Arguments***

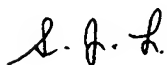
Applicants argue that there is too much picking and choosing of polymers in Inoue to arrive at the present invention. However, as discussed above, for the particulate polymer having heat-reactive group, Inoue makes a copolymer of allyl methacrylate and butyl methacrylate (see [0201]-[0202]). Since Inoue teaches the equivalence of the allyl methacrylate and (meth)acrylic acid as the monomers having heat-reactive group, it would have been obvious to one skilled in the art to use a copolymer of (meth)acrylic acid and butyl methacrylate as Inoue's particulate polymer having a heat-reactive group with a reasonable expectation of obtaining a lithographic printing plate precursor having a good on-the-machine developability. Also, as discussed above, Inoue furthermore teaches the use of hydrophilic resin (which examples include *cellulose or starch derivative or a resin including an amino group*) in his heat-sensitive layer in order to improve the on-the machine-developability. It is the Examiner's position that there are not that many resins to choose from in the list, and thus it would have been obvious to one skilled in the art to use *cellulose or starch derivative or a resin including an amino group* as Inoue's hydrophilic resin with a *reasonable expectation* of obtaining a lithographic printing plate precursor having a good on-the-machine developability. It is also the Examiner's position that Inoue's heat-

sensitive layer coating, which contains a copolymer of (meth)acrylic acid and butyl methacrylate, hydrophilic resin (such as cellulose or starch derivative or a resin including an amino group) and a light-to-heat converting agent, would inherently be aqueous-insoluble when dried).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S. Lee  
July 24, 2006



**SIN LEE**  
**PRIMARY EXAMINER**